

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P938421

Luminaire Tested: SQ4-FB-150U-100D-927-1D-UNV-STD-W-12

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P938421
REPORT IS A COMBINATION OF REPORTS P933623 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FB-150U-100D-927-1D-UNV-STD-W-12
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

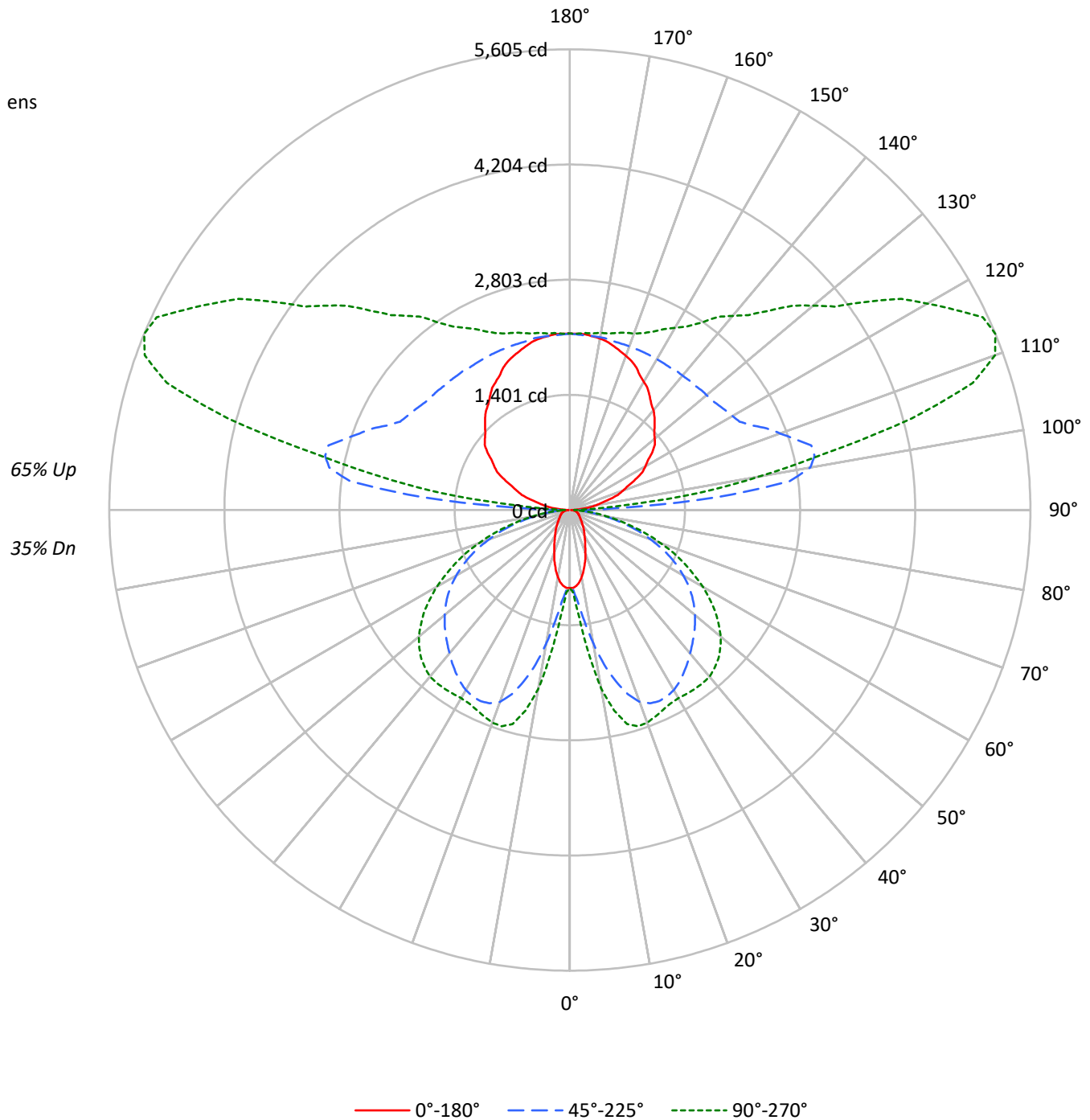
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21267.4 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 217.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20	
RC	80				70				50				30				10				0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	103	103	103	103	93	93	93	93	75	75	75	58	58	58	42	42	42	35				35
1	94	90	86	82	85	81	78	75	65	63	60	50	49	47	36	35	35	28				28
2	85	78	72	66	77	70	65	61	56	53	49	43	41	39	32	30	29	23				23
3	77	68	61	55	69	61	55	50	49	45	41	38	35	32	28	26	24	19				19
4	71	60	52	46	63	54	47	42	43	38	34	34	30	27	24	22	20	16				16
5	64	53	45	39	58	48	41	36	39	33	29	30	26	23	22	19	17	14				14
6	59	47	39	33	53	43	36	30	34	29	25	27	23	20	19	17	15	12				12
7	54	42	34	29	49	38	31	26	31	26	22	24	20	17	18	15	13	10				10
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	16	13	11	9				9
9	47	35	27	22	42	31	25	20	26	20	17	20	16	14	15	12	10	8				8
10	43	31	24	20	39	29	22	18	23	18	15	18	15	12	13	11	9	7				7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2936	2936	2936
5°	2869	3394	3946
10°	2603	4949	6542
15°	2214	6467	7900
20°	1803	7496	8051
25°	1504	7846	7887
30°	1269	7898	7872
35°	1123	7769	8076
40°	979	7600	8286
45°	887	7478	8319
50°	814	7368	8181
55°	781	7206	7819
60°	800	6893	7246
65°	834	6415	6459
70°	890	5598	5457
75°	991	4569	4258
80°	1090	3173	2869
85°	988	1686	1469

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 8319 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.8	0.6
10°-20°	544.2	2.6
20°-30°	951.8	4.5
30°-40°	1225.3	5.8
40°-50°	1368.6	6.4
50°-60°	1310.8	6.2
60°-70°	1038.8	4.9
70°-80°	610.8	2.9
80°-90°	177.9	0.8
90°-100°	1046.4	4.9
100°-110°	2751.1	12.9
110°-120°	2852.6	13.4
120°-130°	2288.1	10.8
130°-140°	1795.4	8.4
140°-150°	1378.0	6.5
150°-160°	992.4	4.7
160°-170°	607.2	2.9
170°-180°	205.1	1.0
0°-30°	1618.8	7.6
0°-40°	2844.0	13.4
0°-60°	5523.4	26.0
0°-90°	7350.9	34.6
90°-120°	6650.2	31.3
90°-150°	12111.7	56.9
90°-180°	13916.0	65.4
0°-180°	21267.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	949	949	949	949	949	
5°	925	992	1117	1264	1309	85
15°	693	1279	2155	2612	2695	193
25°	442	1450	2567	2680	2683	204
35°	299	1386	2417	2554	2655	187
45°	204	1105	2136	2448	2558	158
55°	146	702	1813	2106	2164	133
65°	116	372	1346	1514	1535	115
75°	86	229	739	812	815	89
85°	30	70	183	201	204	32
90°	14	40	110	55	55	14
95°	138	542	1802	929	632	154
105°	496	751	3041	4618	4308	525
115°	880	1069	2436	4860	5547	869
125°	1225	1373	2216	3744	4417	1087
135°	1460	1606	2147	3023	3428	1129
145°	1693	1801	2119	2579	2781	1061
155°	1913	1967	2119	2327	2394	879
165°	2065	2092	2119	2203	2230	583
175°	2147	2147	2134	2161	2161	204
180°	2147	2147	2147	2147	2147	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	949.2	949.2	949.2	949.2	949.2	949.2	949.2	949.2	949.2	949.2	949.2
2.5°	949.2	949.2	955.3	958.3	964.4	967.5	973.6	979.7	998.0	1001.1	1007.2
5°	924.8	936.9	976.7	991.9	1034.6	1092.6	1117.0	1156.7	1239.1	1263.5	1278.7
7.5°	888.1	915.6	1013.2	1037.7	1144.5	1297.1	1361.2	1446.6	1577.9	1641.9	1693.8
10°	830.1	888.1	1062.1	1120.0	1294.1	1526.0	1645.0	1764.1	1962.4	2050.9	2084.5
12.5°	766.1	860.6	1114.0	1193.3	1443.6	1782.3	1925.8	2057.1	2282.9	2401.9	2420.2
15°	692.8	821.0	1162.8	1278.7	1602.3	1996.0	2154.7	2316.5	2527.1	2612.5	2633.9
17.5°	628.7	790.5	1208.6	1330.6	1724.3	2188.3	2350.0	2484.3	2655.2	2713.2	2728.5
20°	549.3	741.7	1239.1	1397.8	1852.5	2328.6	2484.3	2588.0	2704.0	2740.7	2746.7
22.5°	491.3	689.8	1257.4	1422.2	1938.0	2414.1	2545.3	2627.8	2707.1	2719.3	2722.3
25°	442.5	631.8	1254.3	1449.7	2011.2	2466.0	2566.7	2627.8	2673.5	2679.6	2679.6
27.5°	396.8	567.6	1242.2	1455.8	2066.2	2478.2	2557.6	2600.3	2621.6	2633.9	2633.9
30°	357.0	506.7	1211.6	1443.6	2090.6	2466.0	2530.1	2551.5	2572.8	2591.1	2600.3
32.5°	326.6	448.6	1165.9	1419.2	2093.6	2435.5	2481.2	2493.5	2524.0	2566.7	2582.0
35°	299.1	390.6	1114.0	1385.6	2075.3	2386.6	2417.2	2429.4	2490.4	2554.5	2575.9
37.5°	271.7	348.0	1046.8	1327.6	2047.9	2328.6	2350.0	2371.4	2466.0	2542.3	2566.7
40°	244.2	311.3	967.5	1263.5	2005.2	2258.5	2276.7	2310.3	2435.5	2524.0	2548.4
42.5°	222.8	280.8	882.0	1196.3	1950.2	2179.1	2206.6	2255.4	2398.9	2493.5	2520.9
45°	204.5	250.2	790.5	1104.8	1880.0	2096.7	2136.4	2203.5	2356.1	2447.7	2472.1
47.5°	186.2	228.9	695.8	1010.2	1803.7	2014.3	2066.2	2142.4	2298.1	2386.6	2408.0
50°	170.9	207.5	601.2	909.5	1721.3	1925.8	1986.8	2066.2	2224.9	2307.3	2334.8
52.5°	158.7	189.2	512.7	808.8	1626.7	1834.2	1904.4	1986.8	2136.4	2215.8	2234.1
55°	146.5	173.9	436.4	701.9	1529.1	1736.6	1812.9	1892.2	2038.7	2105.9	2118.0
57.5°	140.4	161.8	372.4	601.2	1425.3	1626.7	1712.2	1785.4	1922.8	1974.6	1986.8
60°	131.2	152.6	323.5	515.7	1312.3	1522.9	1596.2	1669.4	1785.4	1828.1	1837.3
62.5°	122.0	146.5	286.9	433.4	1196.3	1400.9	1474.1	1541.2	1638.9	1669.4	1681.6
65°	116.0	140.4	259.4	372.4	1077.4	1272.7	1345.9	1403.9	1483.3	1513.7	1519.9
67.5°	109.9	134.3	238.1	320.5	958.3	1144.5	1199.4	1254.3	1315.4	1345.9	1349.0
70°	100.7	128.2	219.8	283.8	836.2	998.0	1043.8	1101.8	1150.6	1165.9	1175.0
72.5°	94.6	119.0	207.5	256.3	711.1	857.6	900.4	933.9	976.7	991.9	991.9
75°	85.5	106.8	195.3	228.9	582.9	701.9	738.6	772.2	805.7	811.8	802.6
77.5°	76.3	94.6	167.9	192.3	454.8	555.5	586.0	604.3	631.8	637.9	640.9
80°	64.1	82.4	131.2	149.5	329.6	408.9	430.4	445.6	470.0	470.0	476.1
82.5°	48.8	64.1	94.6	106.8	222.8	280.8	299.1	308.2	323.5	323.5	323.5
85°	30.5	39.7	61.1	70.2	134.3	170.9	183.1	186.2	198.4	201.4	201.4
87.5°	15.2	21.3	39.7	42.7	70.2	88.5	88.5	94.6	94.6	91.6	88.5
90°	14.4	25.9	37.5	40.3	63.4	94.1	109.5	97.3	73.0	54.7	54.7
92.5°	57.6	155.5	253.6	278.0	390.9	541.4	616.6	540.4	388.0	273.7	262.9
95°	138.3	317.5	496.9	541.7	962.0	1522.3	1802.4	1608.4	1220.4	929.3	896.4
97.5°	239.2	397.3	555.5	595.1	1295.8	2230.0	2697.1	2574.5	2329.2	2145.3	2082.5
100°	316.9	460.4	603.8	639.7	1417.3	2453.9	2972.3	2981.2	2999.2	3012.6	2937.9
102.5°	383.2	517.1	650.9	684.4	1472.9	2524.4	3050.1	3206.4	3518.8	3753.2	3689.1
105°	495.6	609.0	722.3	750.7	1514.3	2532.4	3041.4	3391.7	4092.2	4617.6	4583.2
107.5°	610.9	716.6	822.2	848.6	1521.9	2419.6	2868.6	3357.1	4334.3	5067.1	5075.5
110°	688.7	784.1	879.5	903.4	1510.4	2319.8	2724.5	3270.7	4363.1	5182.4	5218.3



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CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	765.1	856.0	946.9	969.7	1510.9	2232.5	2593.4	3152.4	4270.4	5109.0	5164.0
115°	880.3	964.2	1048.1	1069.1	1524.8	2132.5	2436.4	2974.9	4051.9	4859.7	4936.1
117.5°	994.1	1070.3	1146.5	1165.5	1553.1	2069.8	2328.2	2814.3	3786.3	4515.4	4600.1
120°	1060.4	1132.1	1203.8	1221.8	1576.2	2048.7	2285.1	2729.1	3617.2	4283.4	4365.7
122.5°	1125.2	1197.6	1270.0	1288.1	1609.4	2037.7	2251.9	2651.8	3451.6	4051.4	4132.6
125°	1224.7	1290.6	1356.6	1373.1	1654.0	2028.6	2215.9	2555.6	3235.0	3744.5	3819.3
127.5°	1305.3	1371.9	1438.5	1455.1	1698.6	2023.3	2185.6	2477.3	3060.7	3498.2	3561.2
130°	1348.6	1420.3	1492.0	1509.9	1731.3	2026.5	2174.1	2433.7	2953.1	3342.6	3400.9
132.5°	1393.2	1464.9	1536.6	1554.6	1757.7	2028.6	2164.0	2396.5	2861.4	3210.1	3262.3
135°	1459.5	1524.8	1590.1	1606.5	1786.6	2026.7	2146.8	2341.4	2730.7	3022.7	3067.7
137.5°	1527.2	1591.9	1656.6	1672.7	1829.8	2039.1	2143.8	2308.4	2637.6	2884.4	2921.2
140°	1583.4	1642.9	1702.5	1717.4	1856.2	2041.2	2133.7	2275.9	2560.2	2773.5	2807.9
142.5°	1626.6	1681.7	1736.7	1750.5	1878.3	2048.6	2133.7	2258.6	2508.4	2695.7	2725.3
145°	1692.9	1741.0	1788.9	1801.0	1907.1	2048.6	2119.3	2221.5	2425.7	2579.0	2601.4
147.5°	1759.1	1805.9	1852.6	1864.3	1949.3	2062.7	2119.3	2199.7	2360.4	2481.0	2499.6
150°	1802.4	1844.7	1887.0	1897.5	1971.4	2070.1	2119.3	2187.3	2323.0	2424.8	2439.8
152.5°	1847.1	1879.1	1911.1	1919.1	1985.8	2074.8	2119.3	2177.3	2293.2	2380.1	2391.5
155°	1913.4	1937.1	1960.7	1966.7	2017.6	2085.4	2119.3	2165.5	2257.7	2326.9	2334.4
157.5°	1962.3	1985.4	2008.4	2014.2	2049.2	2095.9	2119.3	2155.2	2226.9	2280.7	2286.1
160°	1995.5	2013.4	2031.3	2035.8	2063.7	2100.8	2119.3	2150.1	2211.5	2257.6	2260.7
162.5°	2028.6	2042.0	2055.4	2058.8	2079.0	2105.9	2119.3	2145.3	2197.2	2236.1	2238.9
165°	2064.6	2076.8	2088.9	2092.0	2101.1	2113.3	2119.3	2137.9	2175.0	2202.9	2206.0
167.5°	2097.8	2103.6	2109.3	2110.7	2118.4	2128.7	2133.7	2145.9	2170.2	2188.5	2189.8
170°	2119.3	2125.1	2130.9	2132.4	2132.8	2133.4	2133.7	2145.9	2170.2	2188.5	2188.5
172.5°	2130.9	2132.1	2133.4	2133.7	2133.7	2133.7	2133.7	2143.4	2162.6	2177.0	2175.9
175°	2146.8	2146.8	2146.8	2146.8	2142.4	2136.7	2133.7	2139.8	2152.0	2161.2	2161.2
177.5°	2146.8	2146.8	2146.8	2146.8	2143.4	2138.9	2136.7	2141.4	2151.1	2158.2	2156.9
180°	2146.8	2146.8	2146.8	2146.8	2146.8	2146.8	2146.8	2146.8	2146.8	2146.8	2146.8



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	949.2	949.2
2.5°	1013.2	1007.2
5°	1303.2	1309.3
7.5°	1754.9	1751.8
10°	2182.2	2209.6
12.5°	2493.5	2499.6
15°	2682.7	2694.9
17.5°	2755.9	2759.0
20°	2759.0	2752.9
22.5°	2725.4	2719.3
25°	2685.8	2682.7
27.5°	2649.1	2652.2
30°	2633.9	2643.0
32.5°	2633.9	2649.1
35°	2639.9	2655.2
37.5°	2636.9	2655.2
40°	2624.7	2646.0
42.5°	2591.1	2606.4
45°	2539.2	2557.6
47.5°	2472.1	2484.3
50°	2386.6	2398.9
52.5°	2279.8	2282.9
55°	2151.6	2163.9
57.5°	2014.3	2017.3
60°	1861.7	1870.9
62.5°	1699.9	1699.9
65°	1529.1	1535.1
67.5°	1352.0	1367.3
70°	1171.9	1175.0
72.5°	994.9	994.9
75°	811.8	814.9
77.5°	637.9	637.9
80°	473.1	476.1
82.5°	326.6	332.6
85°	204.5	204.5
87.5°	94.6	85.5
90°	54.7	54.7
92.5°	219.3	175.8
95°	764.4	632.5
97.5°	1831.5	1580.5
100°	2638.9	2339.8
102.5°	3433.0	3176.9
105°	4445.6	4307.9
107.5°	5108.8	5142.1
110°	5361.7	5505.2



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	5384.3	5604.6
115°	5241.5	5546.9
117.5°	4938.8	5277.5
120°	4694.8	5023.9
122.5°	4457.3	4781.9
125°	4118.3	4417.4
127.5°	3813.6	4065.8
130°	3633.9	3867.0
132.5°	3470.9	3679.7
135°	3247.6	3427.6
137.5°	3068.5	3215.8
140°	2945.6	3083.2
142.5°	2843.8	2962.2
145°	2691.1	2780.7
147.5°	2573.9	2648.1
150°	2500.0	2560.2
152.5°	2437.0	2482.4
155°	2364.4	2394.5
157.5°	2307.2	2328.2
160°	2272.9	2285.1
162.5°	2250.5	2262.0
165°	2218.1	2230.3
167.5°	2194.9	2200.0
170°	2188.5	2188.5
172.5°	2171.4	2166.9
175°	2161.2	2161.2
177.5°	2151.8	2146.8
180°	2146.8	2146.8



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	3.15	3.91	4.22	4.99	6.46	16.34	17.10	17.41	18.18	19.65
	3H	3.84	4.53	4.92	5.61	7.10	18.17	18.86	19.25	19.94	21.43
	4H	4.14	4.79	5.23	5.87	7.37	18.82	19.47	19.91	20.55	22.05
	6H	4.38	4.98	5.48	6.07	7.58	19.25	19.84	20.35	20.94	22.45
	8H	4.45	5.02	5.55	6.12	7.63	19.37	19.94	20.47	21.04	22.55
	12H	4.46	5.00	5.57	6.10	7.63	19.43	19.98	20.55	21.08	22.60
4H	2H	10.36	11.00	11.46	12.09	13.59	16.60	17.25	17.70	18.33	19.83
	3H	11.91	12.46	13.02	13.57	15.08	18.64	19.18	19.75	20.30	21.81
	4H	12.00	12.50	13.11	13.61	15.14	19.40	19.90	20.52	21.01	22.54
	6H	12.01	12.44	13.13	13.56	15.09	19.94	20.37	21.06	21.50	23.02
	8H	11.98	12.38	13.10	13.50	15.04	20.10	20.51	21.22	21.63	23.16
	12H	11.93	12.30	13.07	13.43	14.97	20.20	20.56	21.33	21.69	23.24
8H	4H	13.44	13.84	14.56	14.96	16.50	19.46	19.86	20.58	20.98	22.52
	6H	13.68	14.01	14.82	15.17	16.71	20.08	20.42	21.23	21.58	23.11
	8H	13.70	13.99	14.84	15.13	16.68	20.31	20.60	21.45	21.74	23.29
	12H	13.66	13.91	14.81	15.05	16.64	20.45	20.70	21.60	21.84	23.43
12H	4H	13.58	13.95	14.72	15.08	16.62	19.40	19.77	20.54	20.90	22.44
	6H	13.94	14.23	15.09	15.37	16.93	20.07	20.36	21.21	21.50	23.06
	8H	14.00	14.26	15.15	15.40	16.99	20.29	20.55	21.45	21.69	23.28